REMARKS

Favorable reconsideration of the present application in light of the above amendment and in light of the following discussion is respectfully requested.

In the outstanding Official Action, Claims 1-3 were rejected under 35 U.S.C. 102(b) as being clearly anticipated by US Patent No. 4,666,945 (Osugi et al.).

As indicated in the Official Action, Osugi et al. discloses a method for producing a CuZnAlZn oxide catalyst.

However, in Osugi et al., this catalyst is used for synthesis of methanol from carbon monoxide and/or carbon dioxide and hydrogen by a gas-liquid-solid phase fluidized bed method or a gas-solid phase fluidized bed method as described in the reference (See Abstract), and methanol is produced by reacting carbon monoxide and/or carbon dioxide with hydrogen in vapor phase in the presence of a fluidized catalyst in the reference (See Test Examples 12-21, Table 2 and Claims 1-4).

On the other hand, the present invention is directed to a method of producing a CuZnAlZr oxide catalyst having activity of converting methanol to hydrogen gas containing almost no CO by oxidative steam reforming reaction wherein partial oxidation and steam reforming reaction are performed, comprising the steps of: reacting a mixture of aqueous solutions of each nitrate of Cu, Zn, Al, and Zr with an aqueous NaOH solution and aqueous $NaCO_3$, solution; producing a precipitate by coprecipitation; aging, filtering, washing, and drying this precipitate to prepare a catalyst precursor consisting of a CuZnAlZr layered double hydroxide; and then calcining this catalyst precursor in an air ambient atmosphere to obtain a CuZnAlZr oxide.

An important difference and advantage of the present invention over the reference is that a CuZnAlZn oxide catalyst having activity of converting methanol to hydrogen gas containing no CO at all, or containing only very little CO by oxidative reforming reaction

wherein partial oxidation and steam reforming reaction are performed in the present invention, and therefore, Applicants respectfully submit that difference is clearly seen between the instantly claimed invention and Osugi et al.

The reference teaches a catalyst for producing methanol by reacting carbon monoxide and/or carbon dioxide with hydrogen in a vapor phase, however, does not teach a catalyst having activity of converting methanol to hydrogen gas containing no CO at all, or containing only very little CO by oxidative reforming reaction.

In the present invention, hydrogen gas containing almost no CO is produced by converting methanol to the hydrogen gas according to a simultaneous partial oxidation reaction and a steam reforming reaction in the presence of the catalyst of the present invention

In view of the above, substantial differences between Osugi et al. and the claimed invention are pointed out.

In view of the present amendments, Claims 1-3 define the differences of the subject matter of the claimed invention and the invention described in Osugi et al. Therefore, Applicants respectfully submit that present amendments overcomes the outstanding rejection.

Applicants have made every effort to address the issues raised by the Examiner, as Applicants understood them, and believe the claims should now be acceptable.

An early and favorable action is therefore respectfully requested.

Respectfully submitted,
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